

REMARKS

Claims 1-12 are currently pending in the present Application.

Claims 4, 8 and 12 stand objected to, but allowable if amended into independent form and to address the § 112, second paragraph rejections pertaining to claim 4.

Claims 1-3, 5-7 and 9-11 stand rejected under § 103(a) as unpatentable over U.S. Patent No. 5,660,428 to Catlin ("Catlin") in view of U.S. Patent No. 6,640,739 to Woodall, *et al.* ("Woodall"). In addition, claims 1-4 stand rejected under § 112, second paragraph, as indefinite for various informalities with respect to the claim language.

Finally, objections have been entered with regard to the drawings and the incorporation by reference of material into the specification, and it is noted that the certified copy of the priority document has not been received.

In response to the foregoing, the Applicant has amended the claims to place claims 8 and 12 into allowable form, and to address the claim 5 objection.

1. The Priority Document Has Been Submitted.

The Examiner is thanked for identifying the lack of entry of the certified copy of the priority document into the record of this case.

The certified copy of German patent document no. 103 08 759.1 was filed on March 16, 2004, approximately two weeks after the February 27, 2004 filing of the present Application. A copy of the March 16, 2004 Claim for Priority, including a photocopy of the first page of the certified copy submitted therewith and a copy of the receipt -stamped return postcard, are enclosed.

Acknowledgement of receipt of the certified copy and satisfaction of the requirements for perfecting the Applicant's claim to priority is respectfully requested.

2. The Specification Objection Has Been Addressed.

In response to the objection to the incorporation by reference of the priority application in the first paragraph of the Specification, the Applicant has amended ¶ [0001] to delete the incorporation clause, without prejudice, in order to place the application in condition for allowance.

3. The § 112 Rejection and Claim Objection Have Been Addressed.

The Applicant has canceled claims 1-4 as substantially duplicating the subject matter recited in claims 5-8. Claim 5 has been amended to address the pending objection by reciting "the carbon fiber-containing plastic composite" at the end of the claim. Claim 9 has been similarly amended. Reconsideration and withdrawal of the objection to claim 5 is respectfully requested.

4. The Claims Are Patentable Over Catlin and Woodall.

The Applicant respectfully traverses the rejection of claims 1-3, 5-7 and 9-11 as unpatentable under § 103(a) over Catlin in view of Woodall, on the grounds that these references fail to teach or suggest the present invention.

The Present Invention: Claim 5 recites a vehicle body in which, *inter alia*, a monocoque body member formed from a carbon-fiber containing plastic composite includes at least one electrical conductor which "is laminated into the carbon fiber-containing plastic composite." As noted in the present specification, by laminating the electrical conductor directly into a strong carbon-fiber

composite material, the present invention eliminates the need for a separate frame to both provide structural strength and to carry wires to conduct electrical power from one portion of the body to another. *See, e.g.*, Specification at ¶[0004].

The Catlin reference is cited as disclosing a monocoque without a separate frame, with electric lines or wiring inserted into a backbone tube of the plastic composite. December 2, 2004 Office Action at 5.

The Applicant respectfully submits that Catlin does not disclose a monocoque body member (*i.e.*, a body “in which the covering [skin] absorbs all or most of the stresses to which the body is subjected” (Websters II)). Instead, Catlin in fact discloses *a conventional tube-frame-type chassis*, which is built up from a large number of aluminum tubes and bulkhead panels. This chassis assembly is then inserted into a mold as the foundation for an injection-molded plastic body, which is molded in place around the chassis frame members. *See, e.g.*, Catlin at:

Chassis (Frame) Assembly:

- 5:44-7:36 (summary description of assembly of aluminum tubes and bulkheads to form a chassis);
- 10:51-15:46 (detailed description of first embodiment “Complete Chassis Assembly,” including detailed description of frame backbone tubes at 15:3-46);
- Figs. 1-12 (aluminum frame tube and bulkhead details).

Body Molding to Chassis (Frame):

- 7:37-8:27 (summary description of placement of chassis into a mold, followed by injection of plastic to form the body: “a pre-assembled chassis is accurately positioned within a first (lower) position of a “clamshell”-type mold ... A second (upper) portion of the mold is configured to fabricate as a unitary piece an automobile body ... the mold is then rotated biaxially until the aluminum chassis is completely immersed in [one of the plastic

body materials] ... The mold is then cooled to room temperature and the integrated chassis/body is removed.”) (emphasis added);

- 16:47-17:44 (detailed description of first embodiment “Body Fabrication and Chassis-Body Integration”)
- Figs. 19, 22 (illustrating completed chassis/molded body assembly)

The Applicant further respectfully submits that Catlin’s carriage of electric wires within one of its aluminum backbone tubes (Catlin at 6:28-33) does not result in the same “product-by-process” as the product produced by the present invention. As noted in MPEP § 2113, “where the manufacturing process steps would be expected to impart distinctive structural characteristics to the final product,” the structure implied by the process steps should be considered when assessing patentability over the prior art.

As a first matter, the products of Catlin and the present invention are fundamentally different – a metal-framed chassis with molded-over body panels carrying wires within backbone tubes, versus a true monocoque with imbedded conductors. Thus, the product-by-process question is inapplicable in the first place. And even if this question is raised, the present invention’s structural characteristics are completely different, *i.e.*, the lamination of conductors directly into the carbon fiber-containing plastic composite material eliminates any need for Catlin’s heavy, space-consuming wire-carrying tubes. The present invention’s structure thus has the characteristics of being lighter and making much better use of space, increasing design flexibility. Thus, the present invention is patentable over Catlin under a product-by-process analysis.

Because Catlin does not disclose the features of the present invention for which it is cited, and these deficiencies are not cured by Woodall (a reference which teaches forming of a cylindrical hull of an air-dropped submersible from carbon fiber), the Applicant respectfully submits that that claims 5-7 and 9-11 are patentable under § 103(a) over these references. Reconsideration and withdrawal of the pending rejection based on Catlin is respectfully requested.

5. Objections to the Drawings.

The Applicant requests reconsideration of the pending drawing objections pertaining to illustration of electric lines (claim 1), contact points (claims 3, 7 and 11), electrical conductors (claims 4, 8 and 9), aluminum conductors (claims 4, 8 and 12), and at least one electrical conductor (claims 6 and 9).

The cancellation of claims 1, 3 and 4 has rendered the objections as to these claims moot.

As to the electrical conductors, as indicated in Specification ¶¶ [0009] and [0010], elements 11 and 12 are identified as electrical conductors (element 11 explicitly, element 12 implicitly, as an aluminum plate is well understood in the art as being an electrical conductor), elements 11 and 12 are identified as being formed from aluminum, and “at least one” of elements 11 and 12 are illustrated in Fig. 1.

As to the remaining objection regarding illustration of “at least one contact point” recited in claims 7 and 11, pertaining to claims 1, 3 and 4, the Applicant respectfully submits that when read in the context of the specification as required, the contact “points” are already sufficiently illustrated by the

conductors 11 and 12. In addition to the contact points already illustrated at the ends of the conductors (*e.g.*, the plate under the windshield frame at the top of the vertical element 11 conductor), the entire surface of the conductor is available to serve as a contact point. *See e.g.*, Specification at ¶ [0010] (use of a broad surface to provide multiple contact points, where element 12 is identified as a plate provided “for contacting large areas or multiple components”). Indeed, one of the advantages of the present invention is that the embedded conductor may be tapped at *any* convenient location along its surface, for example, by simply drilling through the carbon fiber-including plastic composite to reach the conductor surface a location convenient to an electrical component.

Accordingly, because contact points are already adequately illustrated, the Applicant respectfully submits that further illustration is not required to either teach one of ordinary skill how to make or use the invention, or to satisfy the requirement for illustration of every claimed feature of the invention.

In view of the foregoing, the Applicant respectfully requests the pending drawing objections be reconsidered and withdrawn.

CONCLUSION

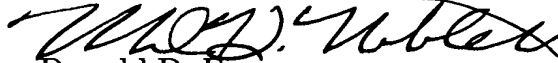
The Applicant respectfully submits that claims 5-12 are in condition for allowance. Early and favorable consideration, and issuance of a Notice of Allowance for these claims is respectfully requested.

If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1323 (Docket #028987.53273US).

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Respectfully submitted,



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